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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,336	06/23/2006	Tomoharu Horio	10921.410USWO	1949
52835	7590	09/15/2009		
HAMRE, SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402-0902			EXAMINER	
			NGO, HUNG V	
			ART UNIT	PAPER NUMBER
			2831	
			MAIL DATE	DELIVERY MODE
			09/15/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,336	<b>Applicant(s)</b> HORIO ET AL.	
	<b>Examiner</b> Hung V. Ngo	<b>Art Unit</b> 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06-23-06</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horio (US 2002/0094177) in view of Applicant Admitted Prior Art (AAPA).

Re claim 1, Horio discloses a semiconductor module comprising:  
a semiconductor device provided with a semiconductor chip (4); and  
a conductive cover (9) for electromagnetic shielding bonded to the semiconductor device; wherein the conductive cover includes a surface, the surface being formed with a convex portion (93), wherein around the convex portion, a space is formed (Fig 17)

Re claim 5, wherein the conductive cover is made of a metal [0064], and the convex portion is formed by embossing (Fig 17)

Re claim 6, wherein the semiconductor device includes a light emitting element (2) capable of generating infrared rays, a light receiving element (3) capable of receiving and detecting infrared rays, and an IC chip (4),  
wherein the semiconductor module is an infrared communication module capable of transmitting and receiving infrared rays (Fig 2).

Re claim 7, Horio discloses a semiconductor module comprising:  
a semiconductor device provided with a semiconductor chip (4); and  
a conductive cover (9) for electromagnetic shielding, wherein the semiconductor device includes a surface, the surface being formed with a convex portion (area outside of recess 92)(Fig 17), wherein around the convex portion, a space is formed.

The teaching as discussed above does not disclose via an adhesive coat (re claims 1, 7), three or more convex portions arranged nonlinearly (re claim 2), two or more elongated convex portions having center axes non-collinear to each other (re claim 3).

AAPA teaches the use of an adhesive coat (98) (Fig 11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the conductive coat with the structure of Horio for the purpose of forming a permanent structure.

It would have been obvious to one having ordinary skill in the art at the time the invention was made include additional convex portions with the structure of Horio for intended use since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the the structure of modified Horio by employing a specific shape for intended use, since more than a mere change of form is necessary for patentability. In *re Span-Deck Inc. v. Fab-Con, Inc.* (CA 8, 1982) 215 USPQ 835.

***Allowable Subject Matter***

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

The limitation "wherein at least a part of the convex portion is positioned on a portion other than the recess" in combination with other limitations present is neither taught nor disclosed in the prior art of record.

***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung V Ngo whose telephone number is (571) 272-1979. The examiner can normally be reached on Monday to Thursday 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Diego Gutierrez can be reached on (571) 272-2800 EXT 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2831

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung V Ngo/  
Primary Examiner, Art Unit 2831